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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,732	03/10/2004	Ramiro Quintero Illera	68349-00008USPX	3413
23932	7590	05/31/2006	EXAMINER	
JENKENS & GILCHRIST, PC			LE, HOANGANH T	
1445 ROSS AVENUE			ART UNIT	
SUITE 3200			PAPER NUMBER	
DALLAS, TX 75202			2821	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/797,732

Applicant(s)

QUINTERO ILLERA ET AL.

Examiner

HoangAnh T. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 and 33-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-13, 25-30 and 33-40 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 14-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


 HoangAnh Le
 Primary Examiner

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The RCE filed on April 28, 2006 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 8,13 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, "said conducting strips" has no antecedent basis.

In claim 13, "the conducting strips" has no antecedent basis

In claim 30, what is meant by "the antenna system is smaller than a half of the free- space operating wavelength"? The length or the width of the system?

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3,9-12,25,27,29,30,33-34, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Luomna (the US Patent No. 5,497,167).

The Luomna reference teaches in figure 1 an antenna system comprising: an antenna element 2; a ground-plane 1 comprising at least two conducting surfaces 4,5 each having a plurality of sides defined by at least one edge; at least one conducting strip connecting the at least two conducting surfaces for allowing current to flow between the at least two conducting surface; and the strip being narrower than the width of any of the at least two conducting surfaces, wherein the ground plane includes at least one gap having an open end between the at least two conductive surfaces, wherein each of the at least two conducting surfaces are of a shape with at least four Sides, and wherein the ground-plane contributes to the radiation performance of the antenna system (figure 1). The conducting surfaces are on a common planar or curved surface (figure1). Two edges of at least two conducting surfaces 4,5 are placed substantially parallel to each other, and the at least one conducting strip connecting the two conducting surfaces is placed substantially centered with respect to the gap defined by the two substantially parallel edges (figure 1). The ground-plane comprises a plurality of conducting surfaces on the same planar or curved surface, wherein at least two of the conducting surfaces are connected by a conducting strip (figure 1). Each two adjacent conducting surfaces are connected by at least a one conducting strip. All the conducting surfaces defining the ground-plane have a substantially rectangular shape, the rectangular shapes being sequentially aligned along a straight axis, each pair of rectangular shapes defining a gap between them, at least two opposite edges of at least one of the gaps being connected by at least one conducting strip (figure 1). All the conducting surfaces defining the ground-plane have the same horizontal width and are

sequentially aligned along a straight vertical axis, wherein each pair of adjacent conducting surfaces define a gap between them, wherein each pair of adjacent conducting surfaces are connected across the gap by a conducting strip, the strip being aligned along an edge of the external perimeter of the ground-plane, the edge being alternatively and sequentially chosen at the right and left sides with respect to a vertical axis crossing the center of the ground-plane (figure 1). The perimeter of the ground plane and the conducting plane are square, rectangular (figure 1). The antenna system is included in a handheld antenna device (col. 1, lines 20-23). The antenna system comprises a microstrip patch antenna 2. The antenna system includes a monopole antenna 2 (figure 1). The opposing edges of adjacent conducting surfaces are linear in shape and disposed one from the other in generally parallel spaced relationship (figure 1).

6. Claims 1-3,9-12,27, and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Carson et al (the US Patent No. 6,911,939).

The Carson et al reference teaches in figures 8-9 an antenna system comprising: an antenna element 110; a ground-plane 530 comprising at least two conducting surfaces each having a plurality of sides defined by at least one edge; at least one conducting strip connecting the at least two conducting surfaces for allowing current to flow between the at least two conducting surface; and the strip being narrower than the width of any of the at least two conducting surfaces, wherein the ground plane includes at least one gap having an open end between the at least two conductive surfaces, wherein each of the at least two conducting surfaces are of a shape with at least four

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sides, and wherein the ground-plane contributes to the radiation performance of the antenna system (figure 9). The conducting surfaces are on a common planar or curved surface (figure 9). Two edges of at least two conducting surfaces are placed substantially parallel to each other, and the at least one conducting strip connecting the two conducting surfaces is placed substantially centered with respect to the gap defined by the two substantially parallel edges (figure 9). The ground-plane comprises a plurality of conducting surfaces on the same planar or curved surface, wherein at least two of the conducting surfaces are connected by a conducting strip (figure 9). Each two adjacent conducting surfaces are connected by at least a one conducting strip. All the conducting surfaces defining the ground-plane have a substantially rectangular shape, the rectangular shapes being sequentially aligned along a straight axis, each pair of rectangular shapes defining a gap between them, at least two opposite edges of at least one of the gaps being connected by at least one conducting strip (figure 9). All the conducting surfaces defining the ground-plane have the same horizontal width and are sequentially aligned along a straight vertical axis, wherein each pair of adjacent conducting surfaces define a gap between them, wherein each pair of adjacent conducting surfaces are connected across the gap by a conducting strip, the strip being aligned along an edge of the external perimeter of the ground-plane, the edge being alternatively and sequentially chosen at the right and left sides with respect to a vertical axis crossing the center of the ground-plane (figure 9). The system includes a microstrip patch antenna 110. The opposing edges of adjacent conducting surfaces are linear in

shape and disposed one from the other in generally parallel spaced relationship (figure 9).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Luoma (cited above) in view of Maruyama et al (the US Patent No. 6,400,330).

The Luoma reference teaches every feature of the claimed invention, excluding the antenna system being mounted inside a rear-view mirror of a vehicle.

The Maruyama et al reference teaches in figure 5 an antenna being mounted inside a rear-view mirror of a vehicle in order to improve the characteristics of the antenna.

Since one of ordinary skill in the art would recognize the benefit of improving the characteristics of the antenna, it would have been obvious to provide Luoma with the antenna system being mounted inside a rear-view mirror of a vehicle as taught by Maruyama et al.

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Luoma (cited above) in view of Endo et al (the US Patent No. 6,271,798).

The Luoma reference teaches every feature of the claimed invention, excluding the antenna system being mounted inside a keyless door lock operation device.

The Endo et al reference teaches in figure 1 an antenna being mounted inside a keyless door lock operation device in order to improve the characteristics of the antenna.

Since one of ordinary skill in the art would recognize the benefit of improving the characteristics of the antenna, it would have been obvious to provide Luoma with the antenna system being mounted inside a keyless door lock operation device as taught by Endo et al.

10. Claims 26,28,38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luoma (cited above) in view of Ali (the US Patent No. 6,885,880).

The Luoma reference teaches every feature of the claimed invention, excluding the antenna system being included in a handheld wireless device, and a planar inverted-F antenna.

The Ali reference teaches in figure 5 an antenna system being included in a handheld wireless device, and a planar inverted-F antenna in order to improve the characteristics of the antenna.

Since one of ordinary skill in the art would recognize the benefit of improving the characteristics of the antenna, it would have been obvious to provide Luoma with the antenna system being included in a handheld wireless device, and a planar inverted-F antenna as taught by Ali.

Allowable Subject Matter

11. Claims 4-7, and 14 -24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Claims 8 and 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

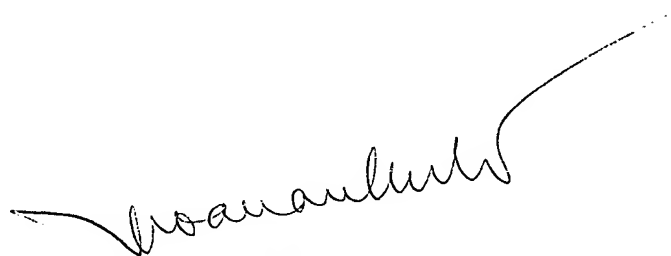
13. Applicant's arguments with respect to claims 1-3,9-12,25-30, and 33-40 have been considered but are moot in view of the new ground(s) of rejection.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HoangAnh T. Le whose telephone number is (571) 272-1823. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Hoanganh Le', with a long, sweeping horizontal line extending to the right.

Hoanganh Le
Primary Examiner